WHAT IS CLAIMED IS:

1. A semiconductor laser element comprising:

a semiconductor substrate,

an active layer formed over the semiconductor substrate,

a ridge having a clad layer formed on the active layer and a contact layer formed over the clad layer,

an insulation film covering the side surfaces of the clad layer, and

an electrode connected to the contact layer,

wherein the insulation layer has an end portion in the ridge thickness direction located between the upper surface and the lower surface of the contact layer.

2. A semiconductor laser element as claimed in Claim 1, wherein

the electrode is formed over the active layer so as to cover the ridge, and

the insulation film is arranged between the side surface of the ridge and the electrode.

3. A semiconductor laser element as claimed in Claim 1, wherein

the contact layer has an upper surface having a width greater than a width of a lower surface.

4. A semiconductor laser element manufacturing method comprising:

a step of forming an active layer over a

semiconductor substrate,

a step of forming a ridge having a clad layer formed on the active layer and a contact layer formed over the clad layer,

a step of forming an insulation film covering the side surfaces of the clad layer and having an end portion in the ridge thickness direction located between the upper surface and the lower surface of the contact layer, and

a step of forming a electrode over the insulation film so as to be connected to the contact layer.

5. A semiconductor laser device comprising a semiconductor laser element including: a semiconductor substrate, an active layer formed over the semiconductor substrate, a ridge having a clad layer formed on the active layer and a contact layer formed over the clad layer, an insulation film covering the side surfaces of the clad layer, and an electrode connected to the contact layer,

wherein the insulation layer has an end portion in the ridge thickness direction located between the upper surface and the lower surface of the contact layer.

6. A semiconductor laser element manufacturing method comprising:

(a) a step of forming a plurality of semiconductor layers on a semiconductor substrate,

(b) a step forming a first semiconductor layer over the plurality of semiconductor layers,

(c) a step of forming a contact layer consisting of a second semiconductor layer over the plurality of semiconductor layers,

(d) a step of selectively removing a portion of the contact layer, and

(e) a step of selectively removing a portion of the first semiconductor layer,

wherein the upper surface of the contact layer has a first direction width greater than a first direction width of the first semiconductor layer after the step (c).

7. A semiconductor laser element manufacturing method as claimed in Claim 6, further comprising:

(f) a step of forming an insulation film over the semiconductor substrate, and

(g) a step of removing the insulation film from the contact layer.

8. A semiconductor laser element manufacturing method as claimed in Claim 7, further comprising:

(h) a step of forming an electrode from Au which is electrically connected to the contact layer.

9. A semiconductor laser element manufacturing method as claimed in Claim 7, wherein after the step (e), the insulation film remains over the side walls of the plurality of semiconductor layers and over the side walls of the contact layer.

10. A semiconductor laser element manufacturing method as claimed in Claim 6, wherein after the step (c), the upper surface of the contact layer has a width in a first direction greater than a width of the lower surface of the contact layer in the first direction.

11. A semiconductor laser element manufacturing method as claimed in Claim 7, wherein step (a) includes:

(a1) a step of forming an n-type clad layer over the semiconductor substrate,

(a2) a step of forming an active layer over the n-type clad layer, and

(a3) a step of forming a first p-type clad layer over the active layer.

12. A semiconductor laser element manufacturing method as claimed in Claim 11, wherein the first semiconductor layer in step (b) is a second p-type clad layer.

13. A semiconductor laser element manufacturing method as claimed in Claim 6, wherein

the contact layer is formed from InGaAs,

the first semiconductor layer is formed from InP,

in step (d), the wet etching method is performed by using an etching solution containing 1% or more of H_3PO_4, H_2O_2, and

in step (e), the wet etching is performed by using an etching solution capable of taking a selection

ratio with respect to the contact layer.

14. A semiconductor laser element manufacturing method as claimed in Claim 6, wherein

the first semiconductor layer has a ridge shape.

15. A semiconductor laser element comprising:

a plurality of semiconductor layers formed over a semiconductor substrate,

a ridge having a first semiconductor layer formed on the plurality of semiconductor layers and a contact layer formed over the first semiconductor layer,

an insulation film covering the side surfaces of the ridge in a first direction, and

an electrode connected to the contact layer,

wherein the upper surface of the contact layer has a width in the first direction greater than a width of the lower surface of the contact layer in the first direction.

16. A semiconductor laser element comprising:

a plurality of semiconductor layers formed over a semiconductor substrate,

a ridge having a first semiconductor layer formed on the plurality of semiconductor layers and a contact layer formed over the first semiconductor layer,

an insulation film covering the side surfaces of the ridge in a first direction, and

an electrode connected to the contact layer,

wherein the upper surface of the contact layer has a width in the first direction greater than a width of the lower surface of the contact layer in the first direction and greater than a width of the first semiconductor layer in the first direction.